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ASSESSMENT OF THE DESIRE TO WORK OVERSEAS AMONG PHYSICIANS WORKING IN ADDIS ABABA.

By
DEREJE AYELE (MD)

ADVISOR
PROFESSOR YEMANE BERHANE
(MD, MPH, PHD, Professor of epidemiology and public health)

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ACRONYMS

ACIPH-UOG =Addis Continental Institute of Public Health-University of Gondar

AOR=adjusted odds ratio

COR=crude odds ratio

ETB=Ethiopian Birr

FMOH=Federal Ministry of Health

GP=General Practitioner

IMG=International Medical Graduate

IRBs=Institutional review boards

MOH =Ministry of Health

NGO =Non-Governmental Organization

OR=Odds Ratio

SPSS=Statistical Package for Social Science

UK=United Kingdom

UNCTAD=United Nations Conference on Trade and Development

UNDP=Unites Nations Development Program

USA=United States of America

Abstract

Background-Ethiopia is one of the developing countries which have low number of physicians partly due to the professionals' migration to work elsewhere since long ago.

Although some studies try to see the magnitude and patterns of physicians who left the country, no attempt was made to assess the desire to work overseas among physicians working in the country.

Objective- To assess the desire to work overseas among physicians working in Addis Ababa government and private hospitals.

Methods- Thirteen government and private hospitals in Addis Ababa were selected for the study and the study participants were physicians working in the selected hospitals. A cross-sectional quantitative study design was used for the study. Data were collected using pre-tested and structured questionnaires.

Results

Out of 278 respondents, 172(61.9%) had desire to work overseas. Marital status (AOR=24.78, CI 1.30, 471.2), shorter duration in marriage (AOR=25.21, CI 1.54, 411.52) and outlook for better working condition (AOR=13.27, CI 1.57, 112.29) showed statistically significant association to desire to work abroad.

Conclusion

The study found that the level of desire to work overseas among physicians is high and similar to studies done in other countries.

1. Introduction

Brain drain is the movement or transfer of skilled professionals from one nation to another for short term stay or permanent workplace change. The term was coined in 1960s to describe the migration of mainly British scholars to the USA (1). Health professionals are one of the common characters in the phenomenon.

Brain drain can take two forms. Internal brain drain is, within a country, and occurs when physicians move from rural to urban areas, form clinical and research position to managerial posts and from public to private sectors or NGOs. External brain drain, which is the point of issue for this study, occurs when physicians leave their home country to work elsewhere for better financial or professional gains.

Developing countries are facing a critical shortage of health workers because so many of their doctors and nurses are leaving them to work elsewhere. The migration of health workers is by and large an offer without charge from poor to wealthier nations. It contributes to worldwide health workforce imbalances that may be detrimental to the health systems of source countries (2)

Physicians' brain drain from one nation to another, in one hand, is a reaction to the lack of opportunity in their home country while on the other hand ,it is a reflection of availability of opportunity and the deliberate and selective promotion of immigration by recipient counterparts. The economic opportunities of the health sector of more developed countries are pulling newly trained physicians from less developed countries (3). Although brain drain of physicians is particularly high from developing nations, developed nations are also losing theirs by the process

to some extent. But the negative consequences as a result in the former are too big to be compared to those in the later (4).

The migration of a large number of doctors from sub-Saharan Africa to the USA has had a negative effect on the doctor-to-population ration of Africa. Approximately 65,000 African born physicians were working overseas in a developed country in the year 2000.Although the fraction of the African physicians in the rich countries varies widely, the equivalent of 23% of doctors trained in sub-Saharan Africa are thought to be working in the rich countries(5).

Although there is no clear document of the number of physicians who have left Ethiopia to work overseas, the country is said to have lost a considerable number of the professionals over the years. The lack of sufficient number of medical professionals, a result of training inadequate number of medical students and an inability to retain those trained, among other factors, has no doubt ailed the health care system of the country(6).

2. Rationale of the study

Knowing the magnitude of intentions of physicians now working in the country to work overseas is believed to give good clue as to how the actual behavior of the physicians towards doing it would look like in favorable circumstances. As a result, the study is thought to be helpful for policy makers to design strategies for way outs from the problem.

3. Literature review

Global perspectives

Brain drain connotes an unbalanced knowledge and skill transfer due to transmigration of intellectuals mostly from developing countries to developed ones, sometimes between developed nations and occasionally between developing nations (4, 7). Although health professionals' migration represents a small proportion of the total skilled power efflux, its effects are prominent because the health care service of a nation depends mainly on the adequacy of the expertise in the country. The health workers have a pivotal role in the health system as they are the most essential of the health sector's resources whose motivation & effective utilization enhances the effectiveness and efficiency with which all the other resources are used(8). As a matter of fact, the consequences of health professional migration will be magnified in the developing countries as they have already had very low stocks of health care professionals (3).

Most developing countries are uncontrollably 'exporting' their physicians to the wealthier ones. The physician migrants from these nations constitute a large population in their developed counterparts. Although the proportion of highly skilled and educated nationals that have migrated from individual developing countries is generally unknown (4), it is estimated that in 2000 almost 175 million people(2.9%) of the world's population were living outside their country of birth, compared to 100 million(1.8%) of that of 1995 (9).

Africa, particularly the sub-Saharan region comes atop when physicians' number of the sub-continent, working overseas in developed nations, is concerned. Approximately 65,000 African born physicians were found working overseas in developed countries in the year 2000. The number represents about one-fifth of African –born physicians in the world (5).In the main

recipient countries-the USA, UK, Canada and Australia, international medical graduates constitute between 3-28% of the physician workforce, with lower income countries offering between 40-45% of the IMGs (10, 11).A study showed, out of a total of 771,491 active non-federal physicians in the USA, 179,978 (23%) received their medical qualification in another country. The majority (64%) had it in low-income or lower middle-income countries, as defined by the World Bank. The most frequent countries of origin of the IMGs in the host countries were found to be India, the Philippines ,Mexico and Pakistan(2,7,12,13).In same study, the physicians from sub-Saharan Africa numbered 5334,which represented more than 6% of the practitioners in the sub-continent by then. The study also showed that nearly 86% of these Africans practicing in the recipient country originated from only three countries: Nigeria, south Africa and Ghana and surprisingly 79% of them were trained at only 10 medical schools(2,13),out of the 87 identified in the sub-region that produced the migrant physicians. Out of the contributions by the sub-Saharan countries, only nine nations have lost more than 40 physicians each. Nigeria with more than twice the population of any other country in the region and with 16 medical schools, lost 2158 physicians who were then working in the USA.South Africa with eight medical schools lost as high as 1943 and Ghana with three medical schools lost 478.By region, west Africa lost 2697 physicians and south Africa 1943(2).

An analysis of medical schools indicates only ten schools produced 79.4% of the sub-continents graduates practicing in the USA and these medical schools were found in only four African countries –the ones afore mentioned and Ethiopia included (2).

Trends of physicians brain drain

The proportion of foreign –trained physicians in said to have generally increased over the previous 20 years in the USA according to a study done in 2004(10).England also showed an increment although not as big as the USA. However, it is found that in Australia and Canada the proportions have decreased quite considerably (14).With regards to the composition of the migrant physicians, developing countries are now becoming the main source of migrant physician in several developed countries. For instance, 12% of migrant physicians in the UK are from Africa. In the USA, 30% of them are from India and Pakistan. In Canada, one-third are from UK and one-tenth from South Africa (14).

In the western world, physician brain drain was so prominent in the years 1960-1979, when it peaked around 1966 -1974.In 1972 alone, it was estimated that about 140,000 of the world's physicians were found in countries other than their native ones (15).There was generally a decreasing trend in the coming two decades, i.e. in 1980-1990 due some extent to decreased licensing of IMGs by most western countries. Then increase in primary health care service in western countries made a surge of physicians' migration since late 1990s up until current time (15).

Factors for physicians brain drain

There are many reasons why physicians migrate and work overseas. The factors are broadly categorized into 'push' and 'pull' factors in different litratures.The negative factors in source countries such as insufficient suitable employment, low pays, unsatisfactory working conditions, lower social status and recognition, poor infrastructure and technology and political and economic instability are considered as push factors and either singly or in combinations

contribute to physicians migration out of own countries of origin. Similarly the pull factors elsewhere attract physicians. These pull factors are better payment and job opportunities ,higher living standards, better practice conditions and more sophisticated research conditions(2-4,16-18).The push factors from the source country and the pull factors from recipients are implicitly categorized into instigating factors, activating factors and facilitating factors. Instigating factors create stimulus for migration. Activating factors generate the perception that there are better opportunities available elsewhere and facilitating factors help to make migration possible (13).While the first ones push physicians from interior outwards, the second ones pull them from exterior. The later plays a role in both directions. Mitigating factors, on the other hand, prevent migration of physicians.

The resultant direction of the sum of the pull and the push factors drives the individual physician to make a decision on migration. In fact, health professionals are at times more affected by one factor than the other. In a study by Nguyen L.et al, nursing students in Uganda put remuneration top on the list over all the other factors of migration (14).

Impacts of physicians' brain drain

The migration of physicians from developing nations to developed ones creates an imbalance of health workforce between the two groups of nations. The brain drain in the former is a brain gain in the later. The developing nations in one end will be at a great loss because of the effect of the exodus on the health care services which is already compromised by high disease burden and poor health systems. On the other end, remittances sent back to sending countries and skills and knowledge gain by migrant physicians in recipient countries can be considered benefits (3).

In a study made in Kenya, the country losses on average US$ 517,931 for every doctor that emigrated assuming an interest rate of 6.65 % (17).UNCTD estimated that each migrating African professional represents a loss of US$ 184,000 (16). Some sub-Saharan countries lose a larger proportion of their physicians to the USA than the others. For instance, while Ghana has reported 1210 practicing physicians in its country, 478 graduates of Ghanaian medical schools are practicing in the USA without even considering those who have migrated to other African countries. These Ghanaians graduates in the USA represent 30% of the countries potential medical workforce. If none of those had come to the USA, the physician-to-population ratio in Ghana would rise from 6.2 to 8.7 per 100,000 or a 40% increase. By comparison South Africa has lost 14% of its potential workforce to the USA and Canada (2).

On the contrary, some developing countries like India and Pakistan are receiving high remittances from their citizen physicians overseas(4,9).The world health report 2006 states that " the government of Philippines has encouraged to temporary migration by its professionals in recent years and taken measures to turn remittances into effective tool for national development by encouraging migrants to send remittances via official channels" .In 2004, the central bank of Philippines reported total remittance of 8.5 billion representing 10% of the country's gross domestic product(GDP)(18).

The United Nations development program (UNDP) estimated the total inflow of remittances for Ethiopia in 2007 at US $ 359 million and the average value of remittances received per person was US $4(6).

The Ethiopian situation

Ethiopia is one of the countries with a low number of physicians with regards to the population size. The main reasons are suboptimal production of the professionals and the continuous exit of those at hand to work overseas. Brain drain of physicians, like in the other developing countries, has resulted in human resource loss and economic loss. Prior to the 1974 revolution, virtually all Ethiopians who attended university in the country remained at the completion of their work and the vast majority of those who studied overseas returned back to Ethiopia. Only one Ethiopian was working outside Ethiopia as early as 1972 (19).It is observable that the environment created during the Derg regime as a result of political persecution and the red terror, was a starting point for emigration of highly skilled Ethiopians .The activity has continued well over to date, although the reasons and the routes of departure for the exodus have somehow changed as well. In the academic years between 1968/1969 and 1995/1996,among those sent officially abroad for higher education in medical science,78 % failed to return back (19).

Current estimates show that in the country, one physician is for 36,000 people (20,21). In 2008/2009, the number of general practitioners in the country was 1101 and that of specialist doctors was 987(21).High medical doctors annual attrition rate have been recorded in the years 1991-2006.The country is facing a major crisis in its health service mainly in the public sector as up to 73% of its doctors are fleeing the country for better remuneration overseas and in NGOs or private sectors (22).

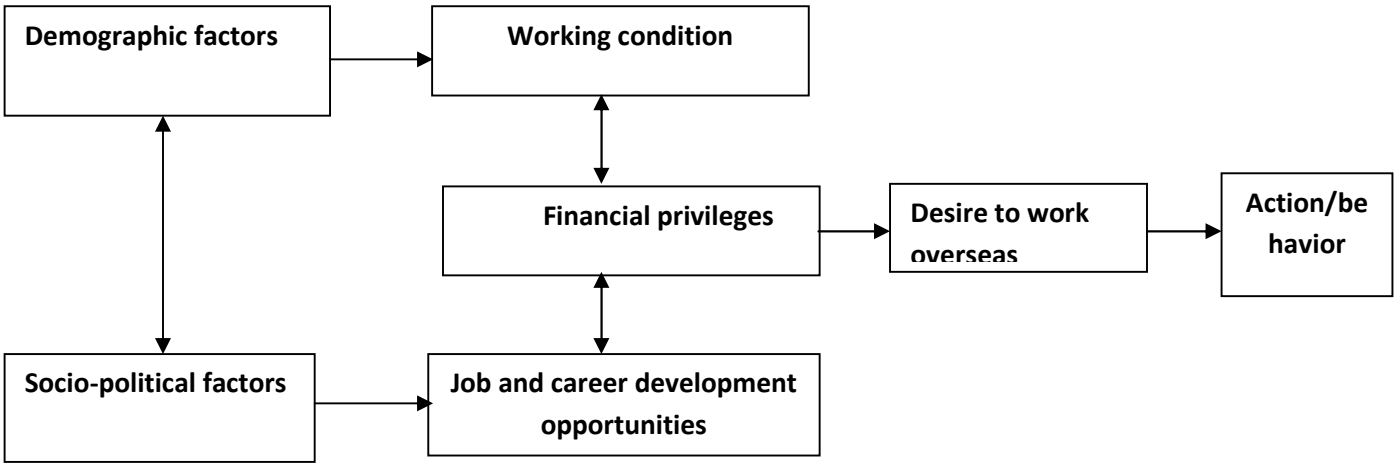
No government establishment in the country is keeping a good record of the issue in question and even compiled information relevant to the issue is lacking in almost all government

establishments including the Addis Ababa university faculty of medicine (19). There is also no study done on the intentions of physicians in Ethiopia to work overseas.

Studies showing intentions to work overseas in other settings.

Nguyen et al found that 70% of nursing students in a study done in Uganda had an intention to go and work outside their country, and that within five years they would likely be working in the US or the UK (23). In a similar study, 406(96%) of 425 students of Lebanese medical schools in the pre-final and final years responding to a survey intended to travel abroad either for specialty training (78 %) or subspecialty training (17%).one hundred and two (25%) of those who intended to train abroad intended to return to Lebanon after working temporarily for a varying number of years, and 43% intended to never return to Lebanon (24). In another New Zealand survey of final year medical students and junior doctors in their first to fourth post graduate year, 69% of the respondents' state that they plan to works overseas (25).

Fig 1. Conceptual framework of factors for desire to work overseas among physicians.



4. Objectives

4.1 General objective

The general objective of the study is to assess the desire to work overseas among physicians currently working in thirteen government and private hospitals in Addis Ababa.

4.2 Specific objectives

The specific objectives of the study are:

- to assess the level of desire to work overseas among physicians currently working in Addis Ababa.

- to determine associated factors for the desire to work overseas among the physicians.

5. Methods

5.1 Study setting

The study was conducted in thirteen selected hospitals in Addis Ababa from Feb 15-April 5, 2011.Eight were government and five private hospitals**.** Currently there are forty-one hospitals in the town giving health service. There were 396 general practitioners and 587 specialists working in the government and private sectors in the town in 2008/2009 (21).

5.2 Study design

A cross sectional quantitative study design was applied to assess desire to work overseas among Ethiopian physicians working in the thirteen selected hospitals in Addis Ababa.

5.3 Source population

The source population for the study was all Ethiopian physicians working in the thirteen government and private hospitals in Addis Ababa.

5.4 Study population

The study population included all physicians in the selected hospitals and who were selected for the study according to the sampling procedure used in the study.

5.5 Inclusion criteria- a physician who was working in one of the study hospitals in Addis Ababa and was available at time of study was included in the study.

5.6 Sample size determination

To determine the level of desire to work overseas among physicians working in the thirteen hospitals in Addis Ababa, sample size was calculated using the single proportion population formula:

$Nu = P(1-P) / d^2 . (Z\alpha/2)^2$

Where Nu=unadjusted sample size

P=prevalence of level of desire to work overseas among physicians.

d=marginal error

Since the magnitude of the desire of physicians to work overseas was not known, p was taken as 0.5.Using 95% CI, 5% marginal error (d), Z=1.96,95%CI

$Nu=0.5(0.5)/(0.05)^2.(1.96)^2$

=384

Since the source population (N) was less than 10,000, we needed to adjust the sample size using the following formula:

Na= Nu/(1+Nu/N) ,Na=adjusted sample size

Nu=unadjusted sample size

N= source population=800

Na=384/(1+384/800) = 384.

=384/ (1.48)

=259

Adding 10% for non-response (26), the total sample size would be 259+26=285

To determine sample size for the second objective, STATCALC EPI-info version 3.3.1 was used to make internal comparison between those with no desire to work overseas and those with desires to work overseas(unmatched cross sectional or cohort studies).The assumptions in the calculation were:

-Financial satisfaction status is one of the determinant factors for physicians to have an intention to work overseas (14).

- Probability that if the two samples differ this reflects a true difference in the populations (CI or 1-α)=95%

-probability that if the two populations differ the two samples will show a “significant difference”(power or 1-β)=80%

-Ratio (number of physicians with no desire to work overseas to number of physicians with desire to work overseas)- 1:3

-Expected frequency of physicians with desire to work overseas among those with no financial constraint taken as 30%

-percent of physicians with desire to work overseas among those with financial constrains taken as 50%.

Using the above assumptions the total sample size turned out to be 276(207 for those with desire and 69 for those with no desire to work overseas).Adding 10% for non-response (28), total sample size came to 304.

Therefore 304 was taken to be the sample size for the study and proportionally allocated for the study hospitals.

5.7 Sampling procedures: The selected study hospitals included Black lion , St.Paul's , Yekatit 12 , Zewditu , Ras Desta , Menelik , police and army from government sector and Betezata, Landmark, St.Yared, MCM and Hayat hospitals from private one. The government hospitals are selected because there are relatively many physicians working in the hospitals than in the private ones. Besides, the Blacklion,St Paul's ,Zewditu and Menelik hospitals offered advantages of accessing residents who are doing their post-graduate studies . The private hospitals selected were found to have relatively larger number of physicians when compared to the other private hospitals. Considering the less cost-effectiveness of doing the study in the private hospitals with few physicians, only the aforementioned ones were included.

First the number of questionnaires to be distributed to each study hospital was determined by proportional allocation to the number of physicians in each hospital as depicted in Table 1. After proportional to size allocation of the total sample to each study hospital, a second stratification was made by dividing each hospital's sample share into samples for GPs, residents and specialists based on the number of physicians in each study hospital and based on estimation of number of physicians at each level of practice in each study hospital (Table 2). Accordingly the physicians in the respective hospitals who met the inclusion criteria and available during the study time were given questionnaires to administer.

Table 1. Proportional to size allocation of sample to study hospitals.

Hospital name	Number of physicians	Number of participants by proportional allocation
Tikur Anbessa*	410	158
St Paul's*	130	50
Yekatit 12	34	12
Zewditu*	39	15
Ras Desta	20	8
Dagmawi Menelik*	44	17
Police	23	8
Army	25	9
Betezatha	19	7
St Yared	12	4
MCM(Ethio-korean)	20	7
Hayat	14	5
Landmark	10	4
Total	800	304

***** Residents included

Table 2. Proportional to size allocation of sample by level of practice.

Name of hospital	Number of physicians			Total
	General practitioners	Residents	specialists	
Tikur Anbessa	22	80	56	158
St Paul's	20	16	14	50
Yekatit 12	8	-	4	12
Zewditu	8	4	3	15
Ras Desta	6	-	2	8
Dagmawi Menelik	10	4	3	17
Police	5	-	3	8
Army	5	-	4	9
Betezatha	4	-	3	7
St Yared	2	-	2	4
MCM(Ethio-korean)	5	-	2	7
Hayat	3	-	2	5
Landmark	2	-	2	4
Total	100	104	100	**304**

5.8 Data collection procedure

5.8.1 Instrument

Data were collected using pre-tested and structured questionnaires. The questionnaire was prepared in English, translated into Amharic and then back to English to confirm consistency .It was self-administered. It contained 24 items pertaining to socio-demographic & socio-economic information, desire to work overseas, outlook for working conditions, outlook for career prospects, outlook for job opportunities &outlook for family concerns and political issues. The variables in the questionnaire were adapted from similar studies done in other settings. The questionnaires were distributed by the principal investigator.

5.8.2 Procedures

A brief introduction about the study objectives was given to the study participants before offering the questionnaires for administration. This was done for groups of physicians found in morning sessions and management sessions of each hospital.

The study questionnaires were mixed with similar papers (clipped sheets of papers equal sized to the study questionnaire) and given to all the physicians available. The number of the actual questionnaires was as per the required number of samples calculated for each hospital and for each level of practice as well. This was made to make a lottery method of sampling. Those who got the actual questionnaires filled the questionnaire and the rest handed back the ‘false’ questionnaires .The procedure was explained to all the participant physicians.

Variables

Independent variables:

-**Socio-demographic factors:** Age, Sex, Marital Status, Duration in marriage, Number of children.

-**Job-related data:** Service year at work, Level of practice (general practitioner, resident, and specialist), Monthly salary, Average monthly income from extra works and average monthly income from non-professional sources.

-**Possible factors for desire for migration:** outlook for working condition of physicians(respect from community, job recognition by the community, work stress and occupational risk of exposures to infections), outlook for career prospects, outlook for Job opportunities, political situations and family concerns.

Dependent variable: Desire to work overseas determined by a Yes or No answer to the question "do you have intention to work overseas?"

Operational definitions

General practitioner-a physician who doesn't have a specific medical specialty and treats all patients of different sex and age groups.

Resident-a physician who is on training to specialize on certain field of medicine.

Specialist – a physician who has done a specialization on certain field of medicine.

Desire to work overseas- refers to the wish or strong interest the physicians have to work in their profession outside their home country.

Outlook for working condition-is attitude that determines the interpretation and response to certain working condition.

5.9 Data management

5.9.1 Data quality assurance

A pre-test was done before launching the actual data collection to check for clarity, completeness and consistency. The pre-test was done by involving physicians not in the study area and numbering nearly 5% (12) of sample size. Some corrections were made after the pre-test feedback (E.g. when i saw the question about the most important reason for desire or no desire, it was found that many of the participants in the pre-test chose more than one. So correction was made to the questions in such a way that the participant is supposed to rank the first three reasons). Data collected were checked for completeness at each day of collection. Each questionnaire was given a code at the top. Some of the questionnaires were discarded because of incomplete filling.

5.9.2 Data analysis

Having checked the data for completeness, data were entered to EPI-info version 3.3.1, and then exported to SPSS version 15.0 for cleaning and analysis. Data was cleaned by using frequency table of SPSS. The item assessing the desire of physicians to work abroad in the questionnaire (Q.12), was used to see the level of the physicians' desire to work overseas determined by the number of physicians who answered 'yes' to the question divided by the total number of

physicians who participated in the study. Bivariate analyses between dependent and independent variables were performed by doing cross-tabulation and seeing OR for 2x2 tables and chi-square values for others .Binary logistic regression to look for association between the independent variables and the outcome one was also performed. Multivariate analysis was made to control for confounding factors.

Outlook for working condition was determined as a sum value of the following variables in the questionnaire: respect physicians get from the community, recognition for physicians job by the community, stressful working condition and occupational risk of infections to HIV, Hepatitis and Tbc. Values for the first two variables were no=-1, don't know=0 and yes=1.For the variable 'stressful working condition', the values were as follows: yes=-1, don't know=0, and no=1.The values for occupational risk of infections were 1 for 'high', 2 for 'significant' and 3 for, ' little'. The sum of the values for the four variables, which is, the value for 'working condition' ranged between -2 and 6. A value between -2 and 0 was taken as 'bad' working condition, 1-3 was 'acceptable' and 4-6 was 'good'.

Working condition as a variable was put in binary logistic regression and in multivariate analysis after the above computation and recoding.

6. Ethical consideration

Ethical clearance was obtained from ACIPH-UOG and permissions from the study institutions were granted before data collection. Before distribution of questionnaires for filling up by the participant physicians, official permission was secured from the ethical clearance committee of Addis Ababa health bureau to conduct the study in the hospitals under it. The permission papers to the respective hospitals were given to the medical directors' offices which approved the permission and facilitated the process. Two of the study hospitals (St.Paul's and Black lion Hospital) have their own IRBs which reviewed the proposal and approved the study for undertaking. Following that, like in the other hospitals, the medical directors' offices allowed the principal investigator to pursue with the study. Before administration of the questionnaire, the participants were informed about the aim of the study and issues of confidentiality were discussed. The participants were informed that they had had the right to stop, postpone or withdraw from participation without any precondition. Those who consented to participate in the study did so by ticking against 'yes' to an interrogation at lower end of the consent form asking if the participant was willing to proceed.

7. Dissemination of results

The results of the study will be communicated to concerned parties through presentations at national and international meetings or symposiums and through publications at related journals.

8-Results

8.1 Socio-demographic and Economic profiles

Out of 304 participants, 278(91.4%) have filled the questionnaires completely. 217(78.1%) of the respondents were male and 61(21.9%) were female. The youngest age was 24 and the oldest respondent was 57 years old. The mean age was 34 years. 114(41%) of the study participants were in the age range 24-29.The age ranges 30-39,40-49,and 50-59 contained 90(32.4%),47(16.9%) and 27(9.7%) of the participant physicians, respectively.

Concerning marital status, 134(48.2%) were single, 142(51.1%) were married and 2(0.7%) were divorced at the time of study. For those in marriage, the study showed 72(50.7%) have stayed in marriage for one to five years,22(15.5%) have stayed in marriage for six to ten years.24 physicians have been in marriage for eleven to fifteen years and same number of physicians have been married for more than fifteen years.

Out of 269 participants who gave information on number of children, the majority (56.1%) had no child .110(40.9%) had children ranging from one to three in number, whereas only 8(3%) had children numbering four and above.

Table 3. Sociodemographic profiles of physicians participated in the study, Addis Ababa, April 2011.

Characteristics	Frequency	Percent
Age groups (years) (n=278)		
24-29	114	41.0
30-39	90	32.4
40-49	47	16.9
50-59	27	9.7
Sex (n=278)		
Male	217	78.1
Female	61	21.9
Marital status (n=278)		
Non-married	136	48.9
Married	142	51.1
Duration in marriage (n=142)		
1-5	72	50.7
6-10	22	15.5
11-15	24	16.9
15+	24	16.9
Number of children (n=269)		
No child	151	56.1
1-3	110	40.9
3+	8	3.0

8.2. Job related information

The number of general practitioners, residents and specialists were 90,103 and 85 constituting 32.4%, 37% and 30.6% of the total number of participants, in respective order.

The mean service year of the physicians was 8.7 years. The minimum and the maximum service years recorded were 1 year and 27 years, respectively.138 (51.3%) of the physicians had service years between 1 and 5 years, 41 (15.2%) had 6 to 10 service years. The physicians who have worked for more than 10 years numbered 90(33.5%).

The current gross monthly salary of the physicians ranged between 1800 and 25,000 ETB, with a mean value of 5231.5 ETB (n=266). 95 (35.7%) of them had a monthly salary below 3000ETB.The majority (41.4%) had gross salaries between 3001 and 6000 ETB.

Table 4. Job related characterstics of participant physicians, Addis Ababa, April 2011.

Characteristics	Frequency	Percent
Level of practice (n=278)		
General practitioner	90	32.4
Resident	103	37.0
Specialist	85	30.6
Service year (n=269)		
1-5	138	51.3
6-10	41	15.2
10+	90	33.5
Gross monthly salary (ETB) (n=266)		
Below 3000	95	35.7
3001-6000	110	41.4
6001-9000	23	8.6
9000+	38	14.3

8.3 Outlooks of physicians for working conditions, payment, job opportunities, career development opportunities and socio-political concerns.

139(49.8 %) of 277 physicians who responded thought that they got due respect from the community. While 100(36.1%) thought that they didn't get due respect from the community, 35(14.5%) had no idea about it, i.e. answered 'don't know'. With regards to work recognition, 127(45.8%) thought that their work is well recognized by the community while 126(45.5%) didn't think so. 24 (8.7%) answered 'don't know'.

The majority (88.5%) of them claimed their working condition was stressful, while one –tenth of them thought it was not so.

Regarding payment, almost all (98.2%) said that they were not as physician well paid. A negligible proportion (1.4%) claimed that they were well paid.

More than half of the physicians (54%) graded the risk of occupational exposures to HIV, Hepatitis and Tb as high, 45.8% graded it as significant while the rest very few thought the risk was little.

With regards to opportunities to further ones education, 222 (79.9%) claimed them to be scarce, 54(19.4%) said they are adequate. Only 2 physicians (0.7%) thought opportunities are many.

54(19.4%) physicians had outlook that there are scarce job opportunities for physicians in the country.160 (57.6%) responded that job opportunities are adequate and 64 (23%) thought the opportunities are many.

The majority (73.2%) had no family related issue to consider emigration and nearly one-fourth claimed they had family related issues.

227(82.2%) had no political concern to consider emigration. 31 (11.2%) said they had such issue. The rest showed indifference.

Table 5. Outlooks of physicians for working condition, payment, career prospects, family and political issues, Addis Ababa, April 2011.

Characteristics	Frequency	Percent
Physicians get respect from community (n=277)		
Yes	138	49.8
No	100	36.1
Don't know	39	14.1
Physicians work is recognized by community (n=277)		
Yes	127	45.8
No	126	45.5
Don't know	24	8.7
Physicians working condition is stressful		
Yes	246	88.5
No	28	10.1
Don't know	4	1.4
Physicians are well paid		
Yes	4	1.4
No	273	98.2
Don't know	1	0.4
Occupational risk of exposures to infections (n=277)		
Little	9	3.2
Significant	118	42.6
High	150	54.2
Opportunities to do specialty or subspecialty		
Scarce	222	79.9
Adequate	54	19.4
Many	2	0.7
Job opportunities for physicians		
Scarce	54	19.4
Adequate	160	57.6
Many	**6**4	23.0
Family issue available to consider emigration (n=276)		
Yes	63	22.8
No	202	73.2
Don't know	11	4.0
Political issue available to consider emigration (n=276)		
Yes	31	11.2
No	227	82.2
Don't know	18	6.5

8.4 Desire to work overseas among physicians

The level of desire to work overseas among the 278 physicians who responded were found to be 61.9 % (56%, 68%).There were similar levels of desire found in both sexes. 61.3 %(56%, 67%) of male physicians and 63.9 %(58%, 69%) female counterparts had desire to work overseas.

The study found similar levels of desire in the age groups 24-29 and 30-39 which are 77.2%(69%,85%) and 66.8%(65%,70%) respectively. The figures are far higher than those of the age groups 40-49 and 50-59 whose levels of desire are 38.3% (25%,50%) and 18.5%(11%,26%) respectively.

With respect to marital status, the desire to work overseas was higher among physicians who are non-married than those who are married. The level of desire in the former was 75.7 % (68%, 83%) while it was 48.6 % (40%, 57%) in the later. Among the married ones, the desire was highest in those who have stayed in marriage the shortest. It was 68.1%(57%,79%) for those who have been married for 1-5 years compared to 45.5%(25%,66%),37.5%(18%,56%) and 12%(9.0%,25%) for 6-10 years,11-15 years and above 15 years marriage durations, respectively.

Those with a higher number of children were found to have a lesser level of desire to work overseas .It was 37.5 % (32%, 43%) for those who have four or more children whereas it was 73.5 %(66%, 80%) for those who have no children.

Physicians who have worked for a fewer number of years were found to have a higher level of desire. 79% (74%, 84%) of those who have worked for 1-5 years had desire to work overseas whereas it was 34.4% (29%,40%) among those whose service year was more than 10 years.

The desire to work overseas was more among residents followed by general practitioners. Specialists had the least desire. The figures were 79.6 % (73%, 83%), 66.7% (59%, 74%) and 35.3 %(25%, 43%) for residents, GPs and specialists, in respective order.

Among those who desire to work overseas the most important reason claimed was better financial gain (64.3%) followed by opportunities for career developments (13.5%) and interest to practice medicine in a better facility (9.9%).

In those who don’t have desire to work overseas ,the most important reason claimed was having a moral obligation to work in the country(29.7%) followed by love of country(27.7%) and family responsibilities(18.8%).

Table 6. Level of desire to work overseas among physicians working in Addis Ababa, April 2011.

Characteristics	level of desire	95% CI
1. Age groups (years)		
24-29	77.2%	(69.0, 85.0)
30-39	66.8%	(65.0, 70.0)
40-49	38.3%	(25.0, 50.0)
50-59	18.5%	(11.0, 26.0)
2 .Sex		
Male	61.3%	(56.0, 67.0)
Female	63.9%	(58.0, 69.0)
3. Marital status		
Non-married	75.7%	(68.0, 83.0)
Married	48.6%	(40.0, 57.0)
4. Marriage duration (years) (n=143)		
1-5	68.1%	(57.0, 79.0)
6-10	45.5%	(25.0, 66.0)
11-15	37.5%	(18.0, 56.0)
15+	12.0%	(9.0, 25.0)
5. Number of children (n=269)		
No child	73.5%	(66.0, 80.0)
1-3	45.5%	(36.0, 54.0)
3+	37.5%	(32.0, 43.0
6. Level of practice		
General practitioner	66.7%	(59.0, 74.0)
Resident	79.6%	(73.0, 87.0)
Specialist	35.3%	(25.0, 43.0)
7. Current gross monthly salary (ETB) (n=266)		
1500-3000	81.1%	(76.0, 86.0)
3001-6000	55.5%	(50.0, 62.0)
6001-9000	34.8%	(29.0, 40.0)
9001+	47.4%	(41.0, 53.8)
8. Number of service years (n=269)		
1-5	79.0%	(74.1, 83.9)
6-10	63.4%	(57.7, 69.0)
10+	34.4%	(28.7, 40.0)

Fig 2. Level of desire to work overseas among physicians working in Addis Ababa, April 2011(n=278)

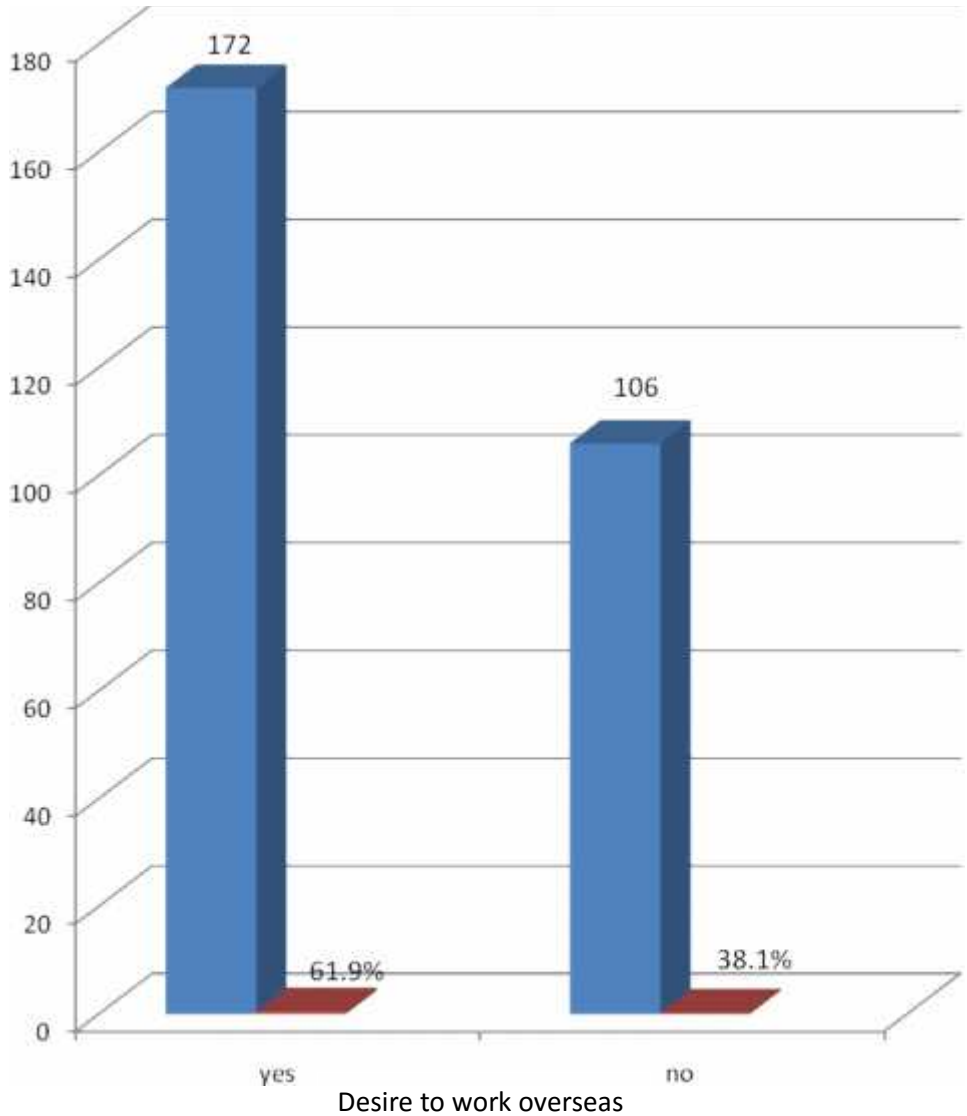


Fig 3. Reasons for desire to work overseas among physicians, Addis Ababa, April 2011. (n=171)

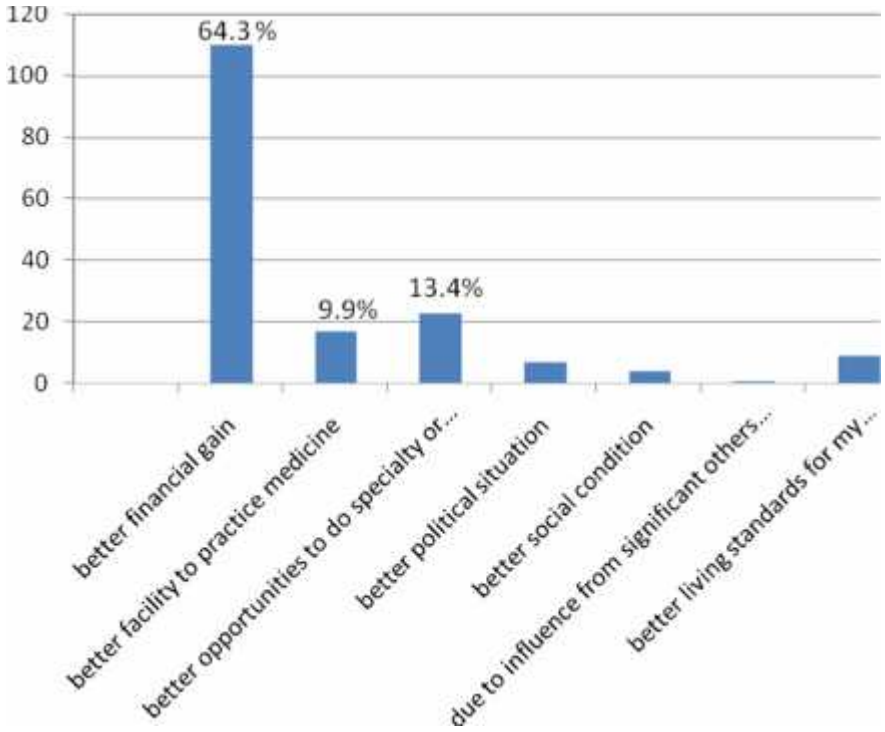
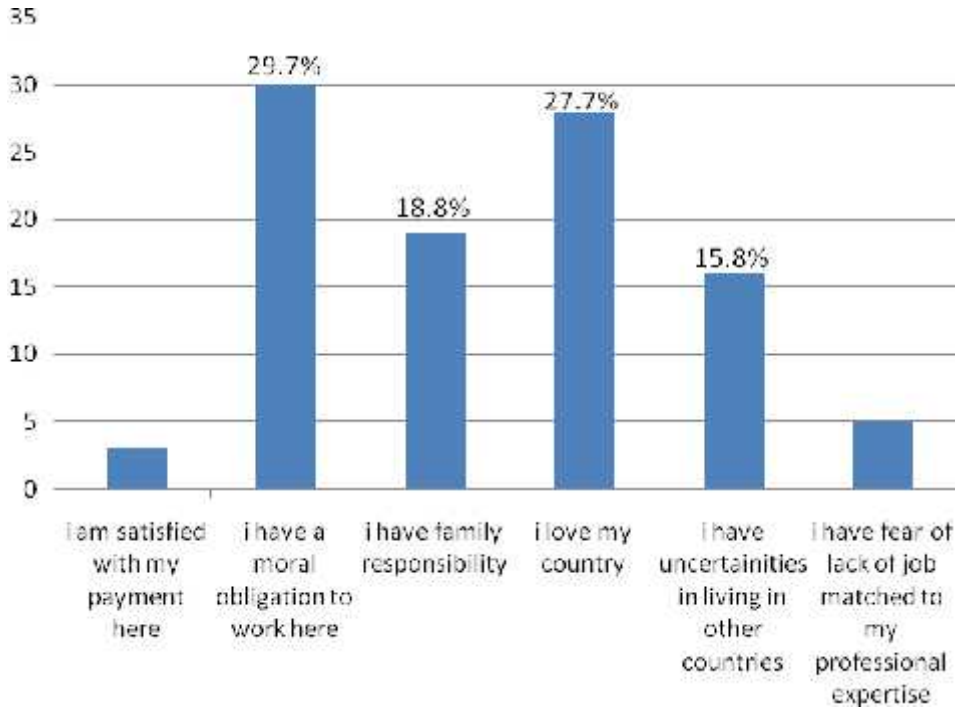


Fig 4. Reasons for no desire to work overseas among physicians, Addis Ababa, April 2011(n=105).



8.5 Factors associated with desire to work overseas among physicians.

8.5.1 Socio-demographic factors

There was no statistically significant difference found in the level of desire in terms of sex difference.

Age group was statistically associated with level of desire. The age groups 24-29 and 30-39 were shown to have a stronger association with desire level than the other age groups. The ORs were 14.89(5.13, 43.2) and 9.25(3.18, 26.9), respectively.

Marital status was also found to have an association with desire to work overseas among the physicians. The desire among non-married physicians was higher than the desire among the married ones (OR=3.3, CI 1.98, 5.50).Among the married ones, those who have stayed in marriage for relatively shorter period of time had a higher level of desire to work overseas than the others. Those who have been married for 1-5 years had nearly a 16-folds higher level of desire when compared to those who have been married for more than 15 years(0R=15.62,CI 4.24,57.56). Those physicians with no child have been found to have a higher level of desire than those with more than three children (OR=4.62, CI 1.06, 20.24).(table)

Table 7. Socio-demographic characteristics associated with desire to work overseas among physicians, Addis Ababa, April 2011.

Variables	Desire to work overseas		Crude OR (95% CI)
	Yes number (%)	No number (%)	
Age group			
24-29	88(77.2%)	26(22.8%)	14.89(5.13,43.2)*
30-39	61(67.8%)	29(32.2%)	9.25(3.18,26.9)*
40-49	18(38.3%)	29(61.7%)	2.73(0.87,8.49)
50-59	5(18.5%)	22(81.5%)	1.00
Sex			
Male	133(61.3%)	84(38.7%)	0.89(0.49,1.61)
Female	39(63.9%)	22(36.1%)	1.00
Marital status			
Non-married	103(75.7%)	33(24.3%)	3.30(1.98,5.5) *
Married	69(48.6%)	73(51.4%)	1.00
Marriage duration (years)			
1-5	49(68.1%)	23(31.9%)	15.62(4.24,57.56) *
6-10	10(45.5%)	12(54.5%)	6.11(1.41,26.56) *
11-15	9(37.5%)	15(62.5%)	4.40(1.02, 18.99)*
15+	3(12.0%)	22(88%)	1.00
Number of children			
No child	111(73.5%)	40(26.5%)	4.62(1.06, 20.24)*
1-3	50(45.5%)	60(54.5%)	1.39(0.32, 6.1)
3+	3(37.5%)	5(62.5%)	1.00

* Statistically significant (P-value< 0.05)

8.5.2 Job related characteristics associated with desire to work overseas among physicians.

With regards to the number of years the physicians have been serving, those who had shorter period had a higher desire level to work overseas. The OR was 7.15(4.13,15.79) for those whose service year was between 1-5 years when compared to those with more than 10 years.

There was also an association between level of practice and desire level. Residents and GPs had higher levels of desire when compared to specialists. They had ORs of 7.16 (3.72, 13.77) and 3.68(1.96, 6.85), respectively.

Gross monthly salary showed an association with desire to work overseas. Those who earn less than 3000 ETB a month had higher desire level than those getting more than 9000 ETB a month (OR 4.75, CI 1.64,25.13).(table)

Table 8. Job-related characteristics associated with desire to work overseas among physicians, Addis Ababa, 2011.

Variables	Desire to work overseas		Crude OR (95% CI)
	Yes number (%)	No number (%)	
Service year (years)			
1-5	109(79.0%)	29(21.0%)	7.15(4.13,15.79)*
6-10	26(63.4%)	15(36.6%)	3.29(1.63,8.53)*
10+	31(34.4%)	59(65.6%)	1.00
Level of practice			
GP	60(66.7%)	30(33.3%)	3.67(1.96,6.85)*
Resident	82(79.6%)	21(20.4%)	7.16(3.7,13.77)*
Specialist	30(35.3%)	55(64.7%)	1.00
Gross salary (ETB)			
Below 3000	77(81.1%)	18(18.9%)	4.75(1.64,25.13)*
3001-6000	61(55.5%)	49(45.5%)	1.38(0.5,6.99)
6001-9000	8(34.8%)	15(65.2%)	0.59(0.17, 3.60)
9001+	18(47.4%)	20(52.6%)	1.00

*statistically significant (p-value<0.05).

8.5.3 Outlooks for working conditions, payment, career and job opportunities, family issues and political issues, associated with desire to work overseas among physicians.

In bivariate analyses, outlook for working condition, outlook for job opportunities, outlook for family issues and political concerns showed statistically significant association to level of desire to work overseas. There was no association found between outlook for payment and outlook for availability of opportunities for further education to the level of desire.(table)

Table 9. Outlooks of physicians for working condition, payment, career prospect opportunities, family and political concerns, associated with desire to work overseas among physicians, Addis Ababa, April 2011.

Variables	Desire to work Overseas		Crude OR (95%CI)
	Yes number (%)	No number(%)	
Outlook for working Condition (n=278)			
Bad	100(81.3%)	23(18.7%)	7.5(2.6, 21.0)*
Acceptable	65(47.8%)	71(52.2%)	1.6(0.58,4.2)
Good	7(36.8%)	12(63.2%)	1.00
Outlook for payment (n=278)			
No (not well paid)	171(62.6%)	102(37.4%)	6.7(0.5, 48.9)
Yes (well paid)	1(25.0%)	4(75.0%)	1.00
Outlook for opportunities to do specialty or subspecialty(n=278)			
Scarce	137(61.7%)	85(38.3%)	0.97(0.4, 7.3)
Adequate	35(62.5%)	21(37.5%)	1.00
Outlook for job opportunities (n=278)			
Scarce	42(77.8%)	12(22.2%)	3.5(1.6, 7.8)*
Adequate	98(61.3%)	62(38.8%)	1.58(0.9, 2.8)
Many	32(50.0%)	32(50.0%)	1.00
Family issue available to consider emigration (n=276)			
Yes (available)	52(82.5%)	11(17.5%)	3.7(1.8, 7.5)*
Don't know	6(54.5%)	5(45.5%)	0.9(0.28, 3.2)
No (not available)	113(55.9%)	89(44.1%)	1.00
Political issue available to consider emigration (n=276)			
Yes (available)	27(87.1%)	4(12.9%)	4.9(1.7, 14.6)*
Don't know	13(72.2%)	5(27.8%)	1.9(0.66, 5.52)
No (not available)	131(57.7%)	96(42.3%)	1.00

*****statistically significant association (P-value<0.05).

8.6 Determinants factors for desire to work overseas.

A multivariate analysis of factors associated with desire to work overseas was done by putting all variables which have showed statistical crude association into a binary logistic regression model. In the analysis, marital status, marriage duration and outlook for working condition were found to be determinant factors for desire to work overseas among the physicians(table).Non- married physicians had far higher level of desire to work overseas than married ones.(AOR 24.78 , CI 1.30,471.2).Physicians who have been married for shorter period had higher desire level (AOR 25,CI 1.54,411.52) for those in marriage for 1-5 yrs when compared to those in marriage for more than 15 years). Those who thought there was a bad working condition had higher desire to work overseas (AOR 13.27, CI 1.57, 112.29).

Table 10. Multivariate analysis of selected variables[#].

Variable	Desire to work overseas yes	no	Crude OR (95% CI)	Adjusted OR (95% CI)
Age group				
24-29	88(77.2%)	26(22.8%)	14.89(5.13,43.2)*	1.23(0.04,36.53)
30-39	61(67.8%)	29(32.2%)	9.25(3.18,26.9)*	3.66(0.27,49.57)
40-49	18(38.3%)	29(61.7%)	2.73(0.87,8.49)	6.99 (0.82,59.26)
50-59	5(18.5%)	22(81.5%)	1.00	1.00
Marital status				
Non-married	103(75.7%)	33(24.3%)	3.30(1.98,5.5) *	24.78(1.30,471.2)**
Married	69(48.6%)	73(51.4%)	1.00	1.00
Marriage duration (years)				
1-5	49(68.1%)	23(31.9%)	15.62(4.24,57.56) *	25.21(1.54,411.52)**
6-10	10(45.5%)	12(54.5%)	6.11(1.41,26.56) *	8.42(0.75,94.11)
11-15	9(37.5%)	15(62.5%)	4.40(1.02, 18.99)*	3.38(.35,32.89)
15+	3(12.0%)	22(88.0%)	1.00	1.00
Number of children				
No child	111(73.5%)	40(26.5%)	4.62(1.06, 20.24)*	4.12(0.10,168.6)
1-3	50(45.5%)	60(54.5%)	1.39(0.32, 6.1)	1.05(0.03,38.01)
3+	3(37.5%)	5(62.5%)	1.00	1.00
Service year (years)				
1-5	109(79.0%)	29(21.0%)	7.15(4.13,15.79)	0 .38(0.03,5.49)
6-10	26(63.4%)	15(36.6%)	3.29(1.63,8.53)*	0.46(0.04,4.44)
10+	31(34.4%)	59(65.6%)	1.00	1.00
Level of practice				
GP	60(66.7%)	30(33.3%)	3.67(1.96,6.85)*	1.14(0.21,6.14)
Resident	82(79.6%)	21(20.4%)	7.16(3.7,13.77)*	0.46(0.05,4.06)
Specialist	30(35.3%)	55(64.7%)	1.00	1.00
Gross salary (ETB)				
Below 3000	77(81.1%)	18(18.9%)	4.75(1.64,25.13)*	1.36(0.18,10.08)
3001-6000	61(55.5%)	49(45.5%)	1.38(0.5,6.99)	0.10(0.02,0.48)
6001-9000	8(34.8%)	15(65.2%)	0.59(0.17, 3.60)	0.08(0.007,0.96)
9001+	18(47.4%)	20(52.6%)	1.00	1.00
Outlook for working Condition (n=278)				
Bad	100(81.3%)	23(18.7%)	7.5(2.6, 21.0)*	13.27(1.57,112.29) **
Acceptable	65(47.8%)	71(52.2%)	1.6(0.58,4.2)	1.35(0.21,8.79)
Good	7(36.8%)	12(63.2%)	1.00	1.00
Outlook for job opportunities (n=278)				
Scarce	42(77.8%)	12(22.2%)	3.5(1.6, 7.8)*	2.69(0.41,17.67)
Adequate	98(61.3%)	62(38.8%)	1.58(0.9, 2.8)	0.87(0.23,3.29)
Many	32(50.0%)	32(50.0%)	1.00	1.00
Family issue available to consider emigration (n=276)				
Yes (available)	52(82.5%)	11(17.5%)	3.7(1.8, 7.5)*	3.97(0.91,17.32)
Don't know	6(54.5%)	5(45.5%)	0.9(0.28, 3.2)	0.27(.001,188.2)
No (not available)	113(55.9%)	89(44.1%)	1.00	1.00
Political issue available to consider emigration (n=276)				
Yes (available)	27(87.1%)	4(12.9%)	4.9(1.7, 14.6)*	4.07(0.52,31.52)
Don't know	13(72.2%)	5(27.8%)	1.9(0.66, 5.52)	36.05(0.16,8237.8)
No (not available)	131(57.7%)	96(42.3%)	1.00	1.00

**statistically significant association (p-value<0.05) after adjusted for the selected variables

All variables with p-values<0.2 were included into the model.

9. Discussion

The study has showed the level of desire to work overseas among physicians in Addis Ababa. It has also tried to discover possible determinants factors for intentions to work overseas among the physicians.

According to the study the level of desire to work overseas among physicians was found to be 61.8%, which is more or less similar to the figures found in other studies in other settings. A study done in New Zealand showed that 69% of final year medical students and junior doctors in their first to fourth post graduation year were found to have intention to work overseas(25). In another study, 96% of Lebanese medical students in the pre-final and final years showed intention to emigrate post graduation (24). A study by Nyguyen et al showed that 70% of the nursing students participated in the study wanted to work overseas (23).

The higher level of desire to work overseas among the younger age groups is due to the fact that they are generally less stabilized in terms of matrimony or economic status than the older ones .Besides , they tend to afford whatever it takes to work or to make career developments elsewhere. There was a higher level of desire in non-married physicians than their married counterparts. Mainly family responsibilities make married physicians have lesser desire to work overseas than the non-married ones.

With regards to the level of practice, residents showed a higher desire to work overseas than GPs and specialists. But this might have given an exaggerated figure due to a tendency of having a higher desire level to work overseas among the residents as a result of high work load and academic stressors they are now in unlike the established GPs and specialists.

Those physicians who have been at work for a relatively shorter period showed a higher desire level to emigrate. This is due to the fact that the longer one is in marriage and the longer he/she has worked, chances are he/she would be stable enough to stay in a certain place, and hence would have lesser level of intention to emigrate.

Although the most important reason cited for having a desire to work abroad was seeking for better remuneration, Gross monthly salary was not found to be statistically associated to desire level in according to the multivariate analysis done for the study. Outlook for payment, too, had no association. Total monthly income from all sources (including part-time work and non-professional income sources) might would have changed the picture. Unfortunately, it was not included in the analysis because fewer than a fourth of the respondents mentioned the amount they earn.

Marital status, duration in marriage and outlook for working condition were found to be determinant factors for desire to work overseas among physicians according to the multivariate analysis. Non- married physicians and those married who have been in marriage for a shorter period of time had higher tendency to have desire to work overseas. Not expectedly, number of children was less associated with desire to work overseas when compared to duration in marriage.

Outlook for working condition (as determined by the outlook of physicians towards respect they get from the community, outlook for the community's recognition of physicians job, outlook for work load they have and outlook for occupational risk of exposures to HIV, Hepatitis and Tbc) showed a strong statistical association to desire level in the multivariate analysis. This probably has something to do with the high prevalences of HIV, Hepatitis and Tbc. The risk of

occupational exposures to these infections is thought to be high as well. High patient load resulting in physicians' stress could make the physicians desire more to work elsewhere. In the study, the physicians who though there was a 'bad' working condition were found to have a statistically higher level of desire to work overseas.

The most common reason found for having desire to work overseas among the physicians was looking for better financial gain. Next to it, more physicians reasoned out their having desire to work overseas for better opportunities to do specialty or subspecialty. This is similar to other studies done in other settings elsewhere (24, 25).

One of the important pull factors for physicians' brain drain is a search for financial privilege. Physicians leave their country for better remuneration for their job in a recipient country. A number of physicians in one country may also be drawn by the availability of career development opportunities in another (2-4, 16-18).

It was not possible to compare the findings of the study with other studies of similar nature done in the country as there was none officially available.

Although the study involved physicians at all levels of practice, it didn't include other health personnel such as nurses, health officers and pharmacists, which, do have roles to play in the health service delivery. Knowing their desire of working abroad is as such valuable, too.

In the study other possible factors for desire to work overseas such as outlook for condition of health service infrastructure and outlook for health service management were not assessed. In my opinion, a more detailed study incorporating these variables would show a more comprehensive picture of the determinant factors in the desire to emigrate among physicians.

10. Strengths and limitations

Strengths

- ✓ There was a high response rate (91%). As a result, the non-response bias was minimized.
- ✓ Physicians at different levels of practice were involved.
- ✓ The study involved almost all government hospitals where majority of the physicians are working permanently.

Limitations

- ✓ The study revealed the level of desire of the physicians which may not reflect the actual behavior of them towards doing it.
- ✓ The study doesn't address health professionals other than physicians.
- ✓ Possible social desirability bias as data were collected by the principal investigator.

11-Conclusion and recommendation

11.1 Conclusion

The study found out that the level of desire to work overseas among physicians is 61.8 % .This figure is high and gives an alarm that a large proportion of the country's limited number of physicians may leave the country for various reasons .

The main reasons for having desire to work overseas are financial gain, better opportunities for career development and better facility for practicing medicine.

The study showed that marital status, duration of marriage and outlook for working condition are determinant factors for level of desire.

11.2 Recommendations

Based on the findings of the study, the following recommendations are forwarded:

- Physicians' remunerations should be improved.
- Since the study found out that outlook of physicians for working condition, which was in the study computed as a sum measure of respect to physicians by the community , community's recognition of physicians work, work stress of physicians and occupational risk of infections, is one of the determinant factors for physicians' desire to work overseas, the following points need to be addressed :
    - The community should offer physicians the due respect they deserve and should get their work recognized.
    - Work load to physicians should be alleviated .This can be done by production of more of the professionals to be involved in the practice to share the burden.
- Since recent graduates and junior doctors are found to have a higher desire to work overseas, particular focus on to this vulnerable group should be given. Promotion of early enrollment to post-graduate studies can be one of the ways to hold these physicians inland.
- A more comprehensive study assessing health service infrastructure and health service management as factors for desire to work overseas ,be done.

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Annex l

Consent form

A study on assessment of desire to work overseas among Ethiopian physicians working in Addis Ababa.

Date----------

Principal investigator: Dereje Ayele

Confidentiality and informed consent statement.

I am the principal investigator for the study of assessment of desire to work overseas among Ethiopian physicians working in Addis Ababa government and private hospitals.

The questionnaire is to be administered by you. You will not write your name on the questionnaire. Your answers to the questions will by no means have any direct risk or benefit for you but will help to assess the desire of Ethiopian physicians to work overseas. The information collected will be confidential. You are allowed not to answer to any of the questions you think should not be answered and you are as well allowed to stop the administration any time in the process if you wish to do so.

Contact person: if you have any question or unclarity, you can contact the principal investigator, mobile 0911170565.

Would you like to participate? Yes---------- No----------

Annex II.Questionnaire

1. **socio-demographic profiles**

Serial no.	Question	Answer
1.	Age	----------yrs
2.	Sex	1-Male 2-Female
3.	Marital status	1-Single 2-Married 3-Divorced 4-Widow/Widower
4.	If married, duration in marriage	----------yrs.
5.	Number of children	---------

2. Job related information

6.	Level of practice	1-General practitioner 2-Resident (1^{st} year,2^{nd} year,3^{rd} year, other) 3-Specialist(mention specialty)----------
7.	Service year(year at work since you held MD)	----------years.
8.	Service year on specialty	----------years
9.	Current gross monthly salary	----------birr.
10.	Estimated average monthly income from other professional tasks (part-time work, etc).	----------birr.
11.	Estimated average monthly income from non-professional sources.	----------birr.

12. Do you have intention to migrate and work overseas?

1-Yes 2-No

13-If yes to question (12), what is the most important reason you desire to work overseas? (If you choose more than one reason, give rank to the first three in the front box).

1-Looking for better financial gain. ☐

2-Looking for a better facility to practice medicine. ☐

3-Looking for better opportunities to do specialty or subspecialty. ☐

4-Looking for better political situations. ☐

5-Looking for better social conditions. ☐

6-Due to influence from significant others abroad (family, partner). ☐

7-Looking for better living standards for my children (schooling, health care, etc). ☐

8-Other----------

14-If No to question (12), your most important reason is (Give rank to the first three reasons if you choose more than one)

1-I am satisfied with my payment here. ☐

2-I have a moral obligation to work here. ☐

3-I have family responsibility. ☐

4-I love my country. ☐

5-I have uncertainties in living in other countries. ☐

6-I have fear of lack of job matched to my professional expertise. ☐

7-other----------

15-How likely is that you would leave Ethiopia and work overseas in the next five years?

1-very unlikely 2-unlikely 3-equivocal 4-likely 5-very likely

3. 0utlooks for working condition, payment, career prospects, family and political concerns.

	Question	**Response**			
16.	Do you think you get a due respect from the community as a physician?	1-Yes	2-No	3-Don't Know	
17.	Do you think your work as a physician is well recognized?	1-Yes	2-No	3-Don't Know	
18.	Do you think your working condition is stressful?	1-Yes	2-No	3-Don't Know	
19.	Do you think you, as a physician, are well paid?	1- Yes	2-No	3-Don't Know	
20.	How do you grade the occupational risk of exposures to HIV, hepatitis and TB infections when working as a physician in Ethiopia?	1-Little	2-Significant	3-High	
21.	How do you assess the opportunities for physicians in Ethiopia to further their education (specialty, subspecialty or other related trainings)?	1-Scarce	2-Adequate	3-Many	
22.	How do you assess the job opportunities for physicians in Ethiopia?	1-Scarce	2-Adequate	3-Many	
23.	Do you have any family related issues that make you consider emigration?	1- Yes	2-No	3-Don't Know	
24.	Do you have any political issues that make you consider emigration?	1- Yes	2-No	3-Don't Know	

Thank you for your participation!

Annex III

Amharic Questionnaire

ቀን ----------

የፍቃደኝነት መጠየቂያ ቅጽ

በአዲስ አበባ ከተማ የሚሠሩ ሐኪሞች ከሀገር ውጪ ለመሥራት ያላቸውን ፍላጎት የሚዳስስ ጥናት

እኔ ከላይ በተጠቀሰው ርዕስ ላይ ጥናት የማደርግ ስሆን ለጥናቱ የሚሆነኝን መረጃ በዚህ መጠይቅ አማካኝነት አሰበስባለሁ።

መጠይቁ በእርሶ የሚሞላ ሲሆን ስምዎን በመጠይቁ ላይ አይጽፉም። ለጥያቄዎቹ የሚሰጧቸው መልሶች በእርስዎ ኑሮ ላይ ምንም አይነት ቀጥተኛ ጥቅምም ሆነ አደጋ የሚያመጡ አይደሉም። ነገር ግን በአጠቃላይ ሐኪሞች ከአገር ውጭ ለመሥራት ያላቸውን ፍላጎት ለመዳሰስ መረጃ በመስጠት ይረዳሉ። የሚሰበስቡት መረጃዎች በሙሉ ሚስጥርነታቸው የተጠበቀ ሲሆን ጥያቄዎቹን ሙሉ በሙሉም ሆነ በከፊል የመዝለል ወይም ዊራሽንም የመተው መብት እንዳለዎት ከወዲሁ አስገነዝባለሁ።

ጥያቄ ወይም አስተየየት ካለዎት በሚከተለው የሞባይል ስልክ ቁጥር ዋና የጥናቱን አድራጊ ማግኘት ይችላሉ።

0911-17 05 65

➢ መጠይቁን ለመሙላት ፈቃደኛ ነዎት?

አዎን ነኝ _____ የለም አይደለሁም _____

1. ማኅበራዊ ሥነ-ህዝባዊ መረጃዎች፡-

ቁጥር	ጥያቄ	መልስ
1.	እድሜ	---------- ዓመት
2.	ጸታ	1. ወንድ 2. ሴት
3.	የጋብቻ ሁኔታ	1. ያላገባ 2. ያገባ 3. አግብቶ የፈታ/ች 4. ባለቤቱ/ቷ የሞተችበት/ባት
4.	ያገቡ ከሆነ የትዳር ጊዜ	_____ ዓመት
5.	የልጆች ብዛት	_____

2. ሥራ ነክ መረጃዎች፡-

6.	የሕክምና ሙያ መደብ	1. ጠቅላላ ሐኪም 2. ሬዚደንት 3. ስፔሻሊስት ሐኪም
7.	የአገልግሎት ዘመን	_____ ዓመት
8.	የአገልግሎት ዘመን በስፔሻላይዜሽን	_____ ዓመት
9.	ጠቅላላ ወርሃዊ ደመወዝ	_____ ብር
10.	አማካኝ ገቢ /ከትርፍ ሰዓት ሥራና ከመሳሰሉት/	_____ ብር
11.	አማካኝ የወር ገቢ /ከሌሎች የገቢ ምንጮች/	_____ ብር

12. ከሀገር ውጪ በመኖያዎ ለመሥራት ፍላጎት አለዎት?

አዎን ☐ የለም ☐

13. ለጥያቄ 12 መልስዎ "አዎን" ከሆነ አብይ ምክንያትዎ የትኛው ነው?
/ከአንድ በላይ ከመረጡ የመጀመሪያ ሦስቱን በደረጃ ያስቀምጧቸው/

1. የተሻለ ገንዘብ ፍለጋ ☐
2. ሕክምናን ለመሥራት የተሻ የሕክምና መስጫ ተቋም ፍለጋ ☐
3. በሕክምና ሙያዬ የቀጣይ ትምህርት ወይም ስልጠና ለመውሰድ የተሻሉ አማራጮች ፍለጋ ☐
4. የተሻለ ፖለቲካዊ ሁኔታ ፍለጋ ☐
5. የተሻለ ማህበራዊ ሁኔታ ፍለጋ ☐
6. ከአገር ውጪ በሚኖሩ ዘመድ ወይም ጓደኛ ተጽእኖ የተነሳ ☐
7. ለልጆቼ የተሻለ የኑሮ ደረጃ ፍለጋ ☐
8. ሌላ /ይጠቀስ/ ----------

14. ለጥያቄ 12 መልስዎ "የለም" ከሆነ አብይ ምክንያትዎ የትኛው ነው
/በአንድ በላይ ከሆኑ የመጀመሪያዎቹን ሦስት ምክንያቶች በደረጃ ያስቀምጧቸዋል/

1. እዚህ በቂ ክፍያ ስለማገኝ ☐
2. እዚህ የመሥራት የሞራል ግዴታ ስላለብኝ ☐
3. የቤተሰብ ኃላፊነት ስላለብኝ ☐
4. ሀገሬን ስለምወድ ☐
5. በውጭ ሀገር መኖር ስለማልተማመን ☐
6. በመኖያዬ ላልሠራ እችላለሁ የሚል ፍርሃት ስላለኝ ☐
7. ሌላ /ይጠቀስ/ ----------

15. በሚቀጥሉት አምስት ዓመታት ከአገር ውጪ የመሥራትዎ ዕድል ምን ያህል ይመስልዎታል?

1. በጣም ጠባብ 2. ጠባብ 3. ሃምሳ በሙቶ 4. ሰፊ 5. በጣም ሰፊ

አጠቃላይ ሀሳቦችን በተመለከተ፡-

	ጥያቄ	መልስ			
16.	ከማኅበረሰቡ እንደ ሐኪም ተገቢ ክብር አገኛለሁ ብለው ያስባሉ?	1 አዎ	2 የለም	3 አላውቅም	
17.	ማኅበረሰቡ ለሥራዬ እውቅና ሰጥቶታል ብለው የስባሉ ?	1 አዎ	2 የለም	3 አላውቅም	
18.	ሥራዎ ጫና የሞላው ነው?	1 አዎ	2 የለም	3 አላውቅም	
19.	እንደ ሐኪም ጥሩ ክፍያ አገኛለሁ ብለው ያስባሉ?	1 አዎ	2 የለም	3 አላውቅም	
20.	በሥራ ላይ እያሉ ለኤች አይ ቪ ለጉበት ቫይረስና ለሳንባ ነቀርሳ አምጪ ተዋስ የመጋለጥ አደጋን እንዴት ይመዝኑታል?	1. አነስተኛ	2. መጠነኛ	3. ከፍተኛ	
21.	ሐኪሞች ሙያቸውን ለማዳበር በሀገር ውስጥ ያሉትን የቀጣይ ትምህት እድሎች እንዴት ይገመግሟቸዋል?	1. አነስተኛ	2. በቂ	3. ብዙ	
22.	የሐኪሞችን በሀገር ውስጥ የሥራ ማግኘት እድሎች እንዴት ይገመግሟቸዋል?	1. አነስተኛ	2. በቂ	3. ብዙ	
23.	ከአገር ውጪ ለመሥራት የሚያደርጉ የቤተሰብ ጉዳይ አለዎት?	1. አዎ	2. የለም	3. አላውቅም	
24.	ከአገር ውጪ ለመሥራት የሚያደርጉ የፖለቲካ ጉዳይ አለዎት?	1. አዎ	2. የለም	3. አላውቅም	

ጊዜዎትን ሰውተው መጠይቁን ስለሞሉ እናመሰግናለን!